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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/068,879 | 02/11/2002 | Keijiro Naito | 111938 | 1409 |

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EXAMINER

LIU, MING HUN

ART UNIT PAPER NUMBER

2675

DATE MAILED: 10/18/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/068,879

Applicant(s)

NAITO, KEIJIRO

Examiner

Ming-Hun Liu

Art Unit

2675

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-15 are rejected under 35 U.S.C. 102(e) as being anticipated by US Patent 6,756,954 to Yamamoto et al.

In reference to claim 1, Yamamoto teaches a LCD display with several pixels, comprising an input terminal that receives a display signal (image 4 and 6, item “image data”) that includes multiple pixel signals (“image signal data”). The display signal having a predetermined signal embedded therein for generating a common signal, for the common voltage, during a predetermined period that does not include the pixel signals (figure 1, where the embedded signal is 212 and the image display period is 221).

In reference to claim 2, by referring to figure 1 of Yamamoto, it can be seen that effective period 221 is a subset of horizontal scanning period 222.

In reference to claim 3, Yamamoto also teaches in embodiment 3, that the common electrode signal is embedded in the scan period.

In reference to claims 4, 8 and 12, it can be seen from figure 4 that the common signal line is commonly connected to multiple pixels. The common signal line driving circuit (130) in response to the predetermined signal, included in the display signal, from

Art Unit: 2675

input terminal (170) supplies the common signal to the driving circuit (column 4, line 65 – column 5, line 2.

In reference to claims 5, 9 and 13, column 5, lines 4-5, Yamamoto teaches a common signal circuit with a register that holds the signal.

In reference to claims 6, 10 and 14, it can be seen from figure 12 that multiple rows of scanning lines and multiple columns of signal lines for selecting multiple pixels. A scanning circuit and a signal driving circuit where the signal line driving circuit holds the image data and the predetermined common voltage data. The signal is then supplied to the common line drive circuit.

In reference to claims 7, 11 and 15, Yamamoto teaches in figures 7 and 8, that the scanning line driving circuit used for sampling the predetermined signal to the common line driving circuit.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yamamoto et al.

In reference to claims 16, 19 and 20, Yamamoto teaches the decomposition of the image data signal, however he does not teach the composition of the original image data. The step of composing the image data signal is inherent to the art. Naturally composition

Art Unit: 2675

would be required before decomposition is performed. It is apparent from the diagrams listed in Yamamoto that the single image line is used to relate both image signals and common signal.

Claim 17 is rejected on the argument provided in the rejection of claim 16 along with the rejection of claim 1.

In reference to claim 18, Yamamoto teaches an invention that does not include an image-processing device that further includes an adjustment control circuit. The absence of an image-processing unit in Yamamoto makes it difficult to justify the addition of an adjustment control circuit, however the examiner believes that such an addition would have been obvious to one skilled in the art, in light of the disclosure offered by Yamamoto.

Yamamoto teaches an image display controller 170 that includes several other detailed circuits that dictate the creation of a common voltage determination signal. The most apparent circuit would be circuit 171 that adjusts the value of the included predetermined signal.

The modification that would have to Yamamoto's invention that would have to be implemented is the manner of implementing the adjustment pre or post combination. As one skilled in the art understands, a signal can be adjusted before or after composition. It would have been obvious to one skilled in the art to make the adjustment before combination off the display circuit to conserve circuit real estate on the display.

Art Unit: 2675

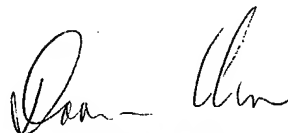
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ming-Hun Liu whose telephone number is 703-305-8488. The examiner can normally be reached on Mon-Fri.

The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ming-Hun Liu


DENNIS-DOON CHOW
PRIMARY EXAMINER